N-AMERICAN Fisherman

MAY
1952
35c

Launching of the "Constitution"
(Pages 10-11)

New Grounds for Tuna Fishing
(Pages 14-15)

$500,000 Clipper Constitution Launched

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The **UNION DIESEL ENGINE** *Co.*

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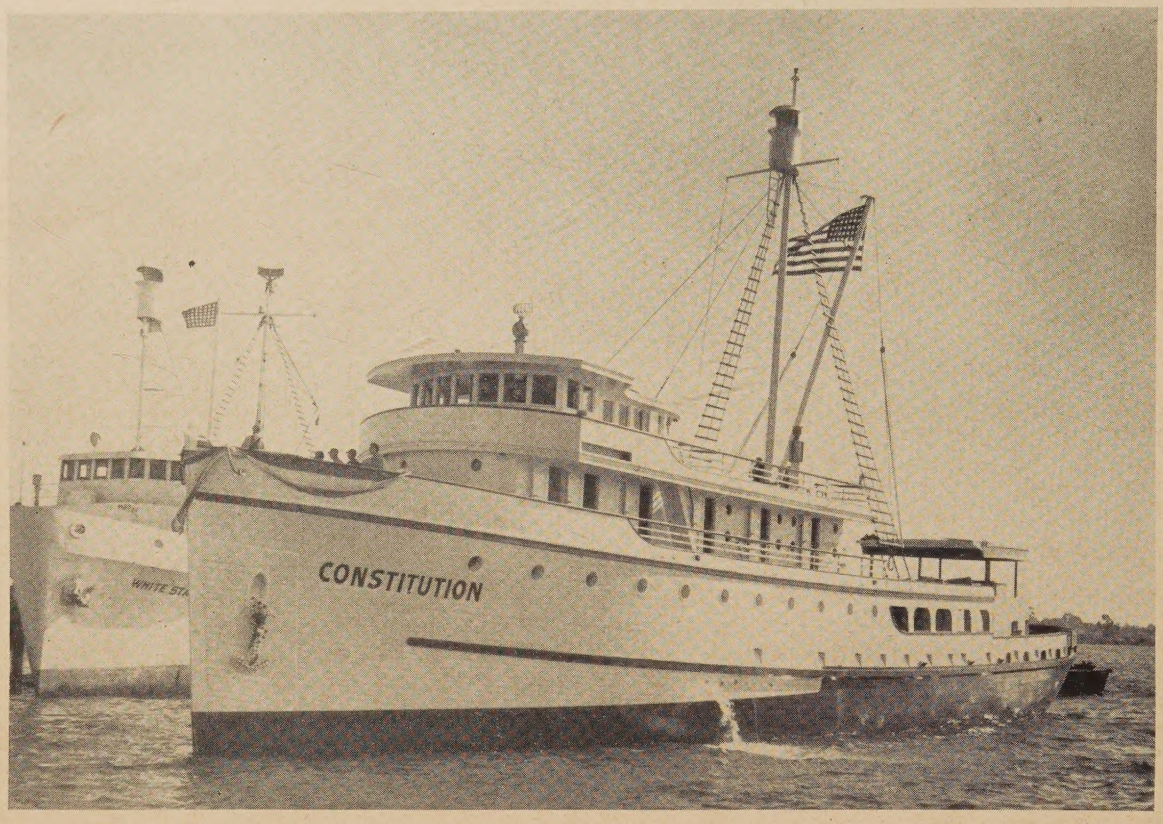

Clipper "Constitution"

Designed and Built for

JOE S. ROGERS and ASSOCIATES

by

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DAVID C. CAMPBELL **GEORGE E. CAMPBELL**

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to the
Builders and Owners
of the
NEW CLIPPER
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Best Wishes for Smooth Sailing
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To the Owners and Builders of the Beautiful Clipper

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The GLOBE

An International News File compiled by FOREIGN BUREAUS of Marine Press Association

Svolvaer, Norway.—The traditional Lofoten cod fisheries in north Norway have so far attracted nearly 23,000 fishermen, more than in many years. However, the total catch to date is only slightly larger than at the same time in 1951, states a March 20 release from the Norwegian Information Service.

Relatively modest quantities have been landed by the 900 purse seiners licensed for this year's Lofoten fisheries. The cod is staying close to the shore, and so far nets have produced the largest catches.

Svolvaer, main town in the Lofoten archipelago, is a beehive of activity. On the first day of the season, its 4,000 population was swelled by nearly 19,000 fishermen, buyers, government inspectors and other visitors. Purse seine gangs from places as far apart as Sogn in the south to the Passvik river in the north, all must stop in Svolvaer to get their license.

Reykjavik, Iceland.—Regulations establishing a four-mile zone for fishing around all of Iceland were issued by the government on March 19, states an American consular dispatch from Reykjavid. The straight base lines of the delimited zone are drawn from the outermost points of the coasts, islands, and rocks, and across openings of bays. All trawling and Danish seine netting, as well as all other foreign fishing activities, are prohibited within this four-mile zone.

The official press release announcing this action emphasized the economic importance of the step taken. The regulation issued become effective May 15, 1952.

London, England.—An underwater television apparatus is now being built for the Scottish Marine Biological Association, states The Fish Trades Gazette, a British fishery periodical. Information regarding this apparatus was presented in a paper given by Dr. J. D. M'Gee to the Royal Society of Arts in London.

The apparatus will consist of a camera mounted in a strong steel case which has a glass window in front of the operative lens and a watertight gland through which the camera cable is brought through the steel cover plate. The author of the paper ("Television Technique as an Aid to Observation") indicated its importance in exploiting to what he referred to as "that vast potential source of food, the ocean."

In outlining the beginning of the genesis of this piece of equipment, the author states that some three years ago Dr. H. Barnes, of the Scottish Marine Biological Association, proposed that a submarine television equipment should be built and tested for underwater observation. An application was made to the treasury for a grant from the development fund. The application was considered by the Development Commission's advisory committee for fisheries research, which recommended that a grant should be made, and who appointed a scientific group to keep in close contact with the work. The grant was authorized early in 1951, and shortly afterwards a contract was placed with a British research laboratory for the construction of suitable equipment.

Manila, Philippines.—An American-owned fishing company was granted a permit in August 1950 by the government for a Philippine-based tuna fishing operation. The company has announced that in order to realize some profit on its investment, it is transferring operations to Siam.

According to reports, the company which is capitalized at $100,000, is effecting the transfer due to its inability to fish for tuna in Philippine waters because of government requirements, high taxes, and difficulties and delays in securing permits. Besides a tax of $25,000 on fishing vessels, taxes of 7 percent on sales and $1.00 per ton on the catch were being levied by the government. In addition, a larger crew was required for the operation of the vessel than in the United States. The company was trying to obtain an exemption from taxation, but this was denied by the government on the grounds that it was not a new industry, an American consular dispatch from Manila points out.

Port of Spain, Trinidad.—The establishment of a small plant for salting and smoking fresh herring as a means of supplementing supplies for local consumption is planned by the government of Trinidad and Tobago. Tests will be made to ascertain the best method of preparing the herring, following which a smokery will be set up, according to the December 8 issue of Canadian Foreign Trade.

Approximately $17,500 will be provided from government funds to meet costs of machinery and production, including the purchase of fish for six months. It is also proposed to apply for a grant of $2,400 from the Development and Welfare Organization to assist the development. The smokery will be operated at first during six months of the herring season and, if the venture is successful, it is hoped that a local firm will take it over and develop it as a commercial enterprise.

Matadi, Belgian Congo.—Canned fish consumption in the Belgian Congo is increasing rapidly, and the colonial administration is making plans to raise the domestic production of this commodity over a long period. Although the Benelux countries are shipping more canned herring to this country, there should be a good market for United States canned "sardines" and herring in the Belgian Congo, provided the latter products are competitive. Price is an important factor.

The popular can size in this market is the 12-ounce oval, and a label with eye appeal will no doubt stimulate the sale of sardines and herring in this market. There are no tariff, exchange, or treaty barriers to the importation of canned fish in the Belgian Congo or Ruanda-Urundi.

Canada obtained 40 percent of the market for canned sardines in 1950 and 41 percent in the first four months of 1951. Canadian exports to this market during the first quarter of 1951 were larger than in the corresponding period a year earlier, though shipments from the United States climbed even more rapidly. Total Belgian Congo imports from all countries in 1949 amounted to 652 metric tons; in 1950 to 1,325 metric tons; and during the first four months of 1951 to 772 metric tons.

Low-priced canned herrings from the Netherlands have been appearing on this market on a large scale during the last year, and are being offered in cases of four dozen 15-ounce cans at the equivalent of about $7.50 (U.S.) c.i.f. Matadi, or at even slightly less, including a three percent commission.

STANDARD ENGINEER'S REPORT

DATA

LUBRICANT RPM Delo Oils

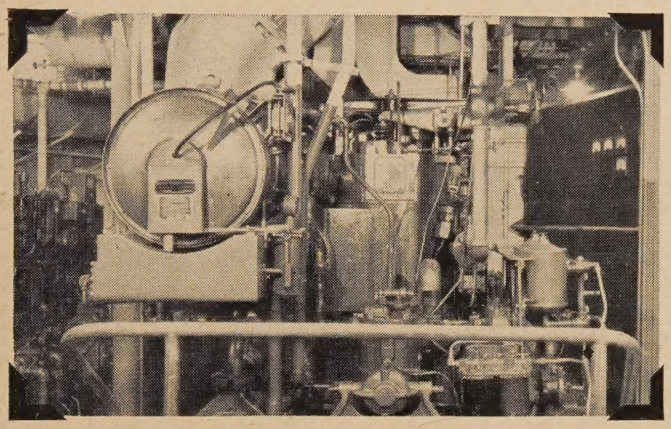
UNIT Atlas diesel engines

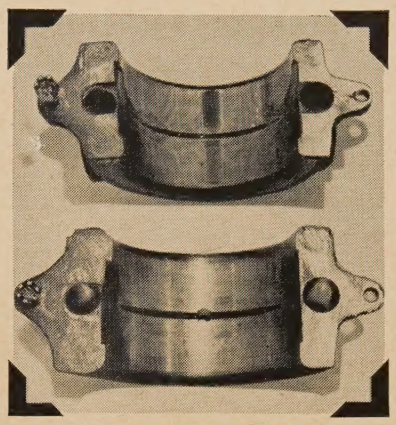
SERVICE Tuna fishing — long cruises

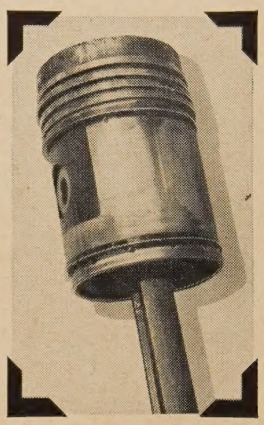
CONDITIONS Constant load operation — high temp.

FIRM. M.V. Lucy Elena, San Diego, Calif.

Engine-cleaning oil saves overhaul, ends bearing failures!





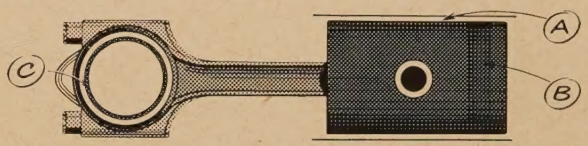


WORKING UNDER CONSTANT LOAD for as long as 90 days at a time, the Lucy Elena's diesel engines continually "gunked up", rings stuck and one of the auxiliaries wiped out a bearing. Switching to RPM DELO Heavy Duty Oil stopped all the trouble. It cleaned deposits from the engines and saved the expense of tearing them down. For over 1½ years now it has kept all moving engine parts clean and in good condition. The connecting-rod bearings and piston shown above came from one auxiliary after 8000 hours operation.

THE M. V. LUCY ELENA fishes off California and South America. Standard Diesel Fuel is used in her engines. Its controlled distillation range, correct flow and proper ignition provide full, uniform power. Standard Diesel Fuel and RPM DELO Oil get the most out of diesels.

CAPTAIN JOHN BALESTRERI of the Lucy Elena, says, "In the tuna-fishing business, engine trouble can be mighty costly both in lost time and cargo. Since using RPM DELO Heavy Duty we have had exceptionally clean engine operation and no bearing trouble as we experienced with the previous oil."

How RPM DELO Oils keep engines clean and prevent wear



A. Contain special additives that provide metal-adhesion qualities...keep oil on parts whether they are hot or cold, running or idle.

B. Anti-oxidant resists deterioration of oil and formation of lacquer...prevents ring-sticking. Detergent keeps parts clean, helps prevent scuffing.

C. Special compounds stop corrosion of any bearing metal, and oil foaming in both wet and dry sump engines.

There is an RPM DELO Oil to meet every heavy-duty engine operation condition.

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STANDARD TECHNICAL SERVICE checked this product performance. For expert help on lubrication or fuel problems, call your Standard Fuel and Lubricant Engineer or Representative; or write Standard Oil Company of California, 225 Bush St., San Francisco.

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STANDARD OIL COMPANY OF CALIFORNIA

PAN-AMERICAN *fisherman*

NEWSmagazine of PAN-AMERICAN FISHERIES combined with the magazine TUNAfisherman

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In This Issue

In this issue is a feature article on the launching of the new tuna clipper, "Constitution," built by the Campbell Machine Co., of San Diego, for Joe S. Rogers and Associates. This new clipper is considered one of the finest ever launched on the West Coast. It is elaborately equipped, and its maiden voyage will be looked to with interest by all members of the Pacific Fishing Industry. Congratulations to all who were associated with the building of this beautiful new clipper, to its owners and crew.

•

The articles being written for Pan-American by John X. Loughran — the second, is on page 13—certainly should be studied by the entire fishing industry. The fact that the products of our industry offer to the world one of earth's greatest, and almost untouched food resources, is a fact we too often overlook. In the waters of the world's oceans and seas, Nature husbands her almost unlimited supply of all those things which make healthful, vigorous life possible in our world. A comprehensive understanding of the nutritional value of sea foods is of importance to all within the fishing industry and its allied activities. Dr. Loughran, one of our country's foremost authorities on food and nutrition, is contributing vital information on the essential role of sea food in the daily diet of the human race.

•

One of the most successful series of articles ever to appear in Pan-American Fisherman, are the articles and recipes being presented by Virginia Taggart, our Home Economist. Mrs. Taggart has long made a study of sea foods of all kinds, and from her experience and training she is a recognized authority on the subject. Her recipe for this month's magazine, Bouillabaisse, is one of the most famous of all sea food dishes. Certainly, anyone following her recipe (you'll find it on page 12) will be a sea food lover for life. And looking at it from a strictly commercial point of view, the amount of fish used in the preparation of this dish, certainly makes it one which the industry could do well to promote vigorously. Incidentally, Mrs. Taggart will be glad to advise any of our readers on the cooking and serving of all kinds of seafood. Just write her in care of this magazine.

The National Fisheries Institute held in Los Angeles, April 17 to 24, is reported to have been one of the best attended, and most successful ever held by the NFI. Although there were quite a few social events, which were very well attended, the keynote of practically all of the various meetings was the serious consideration of the critical problems facing the fishing industry throughout the country. On page 9 is a brief summary of the convention. As Pan-American Fisherman closed its pages about the same time as the close of the convention, a more detailed report on the convention and an evaluation of its accomplishments must wait until the June issue.

•

Of interest to all members of the fishing industry is the article on the results of the U. S. Fish and Wildlife Service's investigation of a potential new source for tuna. This source has long been suspected and the scientific investigation conducted by the U. S. research group, will be continued throughout '52.

•

It is sad to report the wide scattering of San Diego's proud fleet of great tuna clippers. We sincerely hope that this condition is only temporary and that the near future will bring about conditions that again see these sleek, proud clippers operating out of the famed "Harbor of the Sun."

•

We want to bring to the attention of all members of the Fishing Industry and its many associated trades, the publication of Pan-American Fisherman's annual Yearbook and Directory. This publication will be undoubtedly the most comprehensive of its type ever to be issued on all of the industry's activities on the vast Pacific Coast. Many of the larger companies serving the Pacific Fisheries have already reserved advertising space in the book, which will be issued in July. To those companies which have not forwarded reservations —we suggest immediate action.

Ounce of Prevention for the Sick Goose

TO a city or district a large and prosperous industry within its borders is a very real, gold-egg producing "goose."

California's tremendous commercial fishing industry, responsible for more than one-third of the nation's annual sea food production, certainly is one of the Golden State's golden assets. It is a source of huge sums of revenue for both state and local governments; it provides profitable employment for many, many thousands, and flows wealth into a large number of California's most prosperous areas.

Each of these areas in which parts of this huge industry are located, should naturally feel fortunate in having such an asset contributing to community prosperity and welfare. Surely local governments, civic groups and organizations should be quick to act when such an important community asset is threatened.

But such is not always the case. Too often the goose grows sick, and for want of an ounce of prevention—in the way of community interest, cooperation and action—the golden goose sickens and even threatens to expire.

Probably the outstanding example of this complacency to permit an important asset vital to community welfare and prosperity to sicken and wither, is the Port and City of San Diego. For many years ranked as its first industry, and now only surpassed by the crisis-stimulated aircraft and navy activities, commercial fishing and its many allied trades, is still rated San Diego's third industry. Yet the pulse of this great industry which once pounded so vigorously is slowing dangerously.

Statistics which are easily available to anyone who cares to take a few minutes to look them up, need not take up the limited space here. Needless to say the decrease in the tonnage of fish landed in San Diego and processed there has decreased alarmingly. The largest of San Diego's canneries is shut down, and most of the others are on a stand-by basis. Many of the great clippers, and even a large number of the smaller craft, all calling San Diego their home port, are unloading their catches at other California ports.

As the only commercial fishing magazine owned by Californians, published and edited within the state, the Pan-American Fisherman is interested in the growth and prosperity of all of the West Coast's fishing centers. But we certainly do regret the alarming decline of the commercial fishing industry in San Diego, so long one of the world's great and most active centers of this billion-dollar industry of the Pacific.

Responsibility for the decline in this tremendous industry which means so much to the permanent community wealth of San Diego, can be laid at many doors. But the thing we most deplore is the inertia of those who have the most to gain in the continued growth and prosperity of the commercial fishing industry in San Diego—local governments, civic, business and commercial groups. Fishing interests at San Diego long have been plagued by a woeful lack of adequate harbor facilities; by taxes and charges which seem out of line; labor strife and working conditions.

Certainly an industry which contributes so much to the community wealth and the commercial prosperity of San Diego, should not be permitted to wither and slip away to other sections. San Diego offers one of the finest natural harbors in the world; its waterfront is ideal for fish canneries and processors, and it does have an abundance of labor skilled in the knowledge of fish catching and processing. There is no logical reason why San Diego's great fishing industry should not have continued to grow and prosper.

A greater interest and appreciation of the fishing industry, which has been a part of San Diego almost from its very beginning; a sincere desire to work with it and assist in solution of problems which arise; a display of a willingness to give as well as take—on the part of San Diego's local governmental bodies, commercial groups and civic organizations, would have accomplished much to insure the permanence, prosperity and continued expansion of San Diego's fishing industry.

No, it is not too late to take these actions, but certainly the time is short, if San Diego is to recapture its fishing industry which, in the years 1948 and 1949 exceeded in valuation that of any fishing port in the United States.

Yes, the golden goose is not too well, but it can be made healthy and egg-laying again.

PAN-AMERICAN
fisherman
NEWSmagazine of PAN-AMERICAN FISHERIES

Record Price

$400 a Ton Offered for Albacore

With the albacore season just around the corner, a Los Angeles fish broker has offered to contract for the purchase of San Diego boat owners' catches, this season, for the unprecedented price of $400 a ton.

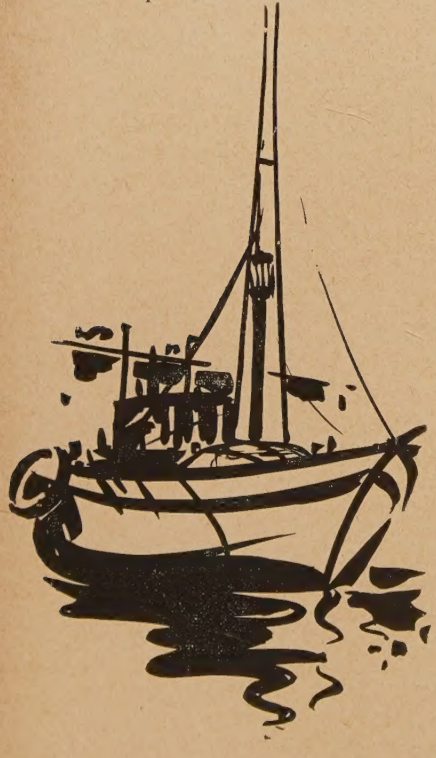
Traditionally, canneries and brokers have announced albacore prices about June 1.

If the scarcity of fish continues, prices are expected to soar to $600 or more a ton by midseason.

Meanwhile, payment by Alaskan canneries of $1000 a ton to fishermen for salmon delivered dockside may have a profound effect on the annual migration of northern fishing craft to San Diego for the albacore season.

Both tuna and salmon are becoming so scarce that boat owners and fishermen are beginning to get worried. From Bristol Bay and Icy Strait comes a report that even with the 50-cents-a-pound price, a record breaking figure for raw fish, salmon fishermen are not reaping large profits.

In the hope that conditions will improve, fishing craft operating out of Puget Sound and the Columbia River that normally begin to move to San Diego for the opening of the albacore season will, it is reported, continue salmon fishing in Alaskan waters.



This was cheering news to 211 members of the San Diego Commercial Fishing Boat Owners Association, according to J. M. Lytle, secretary. Lytle pointed out that if the northern boats continue to fish for salmon the local albacore boats will have less competition.

OPERATION CO-OP

Exploration:

A five-ship exploration of an area of more than four million square miles of the Pacific Ocean, off the Central American Coast is now in progress. The survey is a joint effort of the Scripps Institution of Oceanography, The Naval Electronics Laboratory, U. S. Fish and Wildlife Service, and the Inter-American Tropical Tuna Commission.

In announcing the plans for the operation which will be officially known as "Operation Co-op," Dr. Roger Revelle, director of Scripps, said it would be "the most ambitious co-operative venture yet undertaken into the greatest unknown area of the earth."

Not only will the operation cover a surface of the sea a third larger than continental United States, but its measurements and observations will extend from the levels of the upper air to the ocean bottom itself.

Revelle and Capt. D. P. Tucker, commanding officer of the Naval Electronics Laboratory, listed the following objectives of Co-op:

Gathering hydrographic data in a practically unknown part of the world.

Determining water movements.

Finding more about the life cycles, environment and migration of Pacific Tuna.

Obtaining samples of life far below the ocean surface.

Learning more about air movements over the eastern Pacific.

Revelle explained that the water movement study had to do with the mystery of the rapid counter equatorial current which races in a direction opposite to that of the prevailing wind. He said that there was some hint that no current existed as a continuous stream but appeared to do so from observation of a series of eddies north of the Equator.

The N.E.L. ship, the EPCE (R)-857, sailed from San Diego April 21 and the Horizon, a Scripps research vessel, will depart May 15. The Gilbert, a Fish and Wildlife vessel, sailed from Hawaii to make its observations May 1 and two other ships of that service will leave from Hawaii and San Pedro in June.

Scientific work on the Horizon will be under the direction of Warren S. Wooster, Scripps asst. oceanographer.

Other Scripps personnel aboard will be A. A. Allanson, R. S. Arthur, E. D. Goldberg, L. D. Berner, A. J. Bush, J. D. Cochrane, Gifford C. Ewing, R. W. Gilkey, E. D. Goldberg, J. S. Kittredge, J. A. Knauss, M. Koide, G. J. Lewis, C. M. Love, N. W. Rakestraw and R. L. Wisner. Also on board will be R. Juhl and M. B. Schaefer, of the Tuna Commission; G. Shumway and R. Dill, of N.E.L.

J. F. T. Saur Jr. will be in charge of scientific work on the PCE (R)-857.

APPOINTMENT

W. A. Spitzer:

Appointment of W. A. Spitzer as western division engine sales representative for Caterpillar Tractor Co. is announced by B. L. Hagglund, western sales manager.

Headquarters in San Leandro, Calif., Spitzer will work with Caterpillar distributors throughout the west, assisting them in a technical capacity in the application and installation of Caterpillar Diesel engines.

A native of Wisconsin and graduate of the University of Wisconsin with a

(*Continued on page 22*)

Emphasis On "Quality" Highlights NFI Convention

More Than 800 Delegates Discuss Problems of Industry

IMPROVED methods of packaging fish products for consumer use, particularly in frozen form; new and unusual uses of fish by-products, including the possibility of products which will be useful in infant feeding; and a concern for higher quality of such products were highlights of the seventh annual convention of the National Fisheries Institute just concluded in Los Angeles.

Some 800 fish producers, packers, processors and distributors from all parts of the United States, Canada, Mexico, Norway and other countries were in attendance.

Charles D. Alhadeff of Seattle was elected president of the Institute, succeeding Royal Toner of New York. Next year's convention will be held in Washington, D. C.

An exhibit showing a colorful array of new packaging for fish products indicated a clear trend toward processing in one pound or similar, ready-to-cook or even pre-cooked fish fillets, steaks and shrimp. Leaders of the industry who spoke at packaging and cutting sessions confirmed the fact that the housewives of the nation are buying and demanding more fish in such forms.

In the field of fish by-products, Mrs. Gertrude Beckwith, president of a California firm which specializes in by-products, startled the convention by predicting that such may well out-strip the original fish for human consumption and especially nutrition. She said she saw no reason why fish meal and fish water (the juice obtained in pressing fish to obtain meal) should not be refined for feeding of infants, convalescents and even those who are concerned with reducing diets.

A program of self-policing on quality and methods of production, based on extensive research projects, was made known at the convention by the United States and Mexican shrimp producers who have joined in an inter-American association for this purpose as well as promoting shrimp to consumers.

When it came to such knotty problems as national fishing rights on the seas of the world, there was great difference of opinion but, generally, it was agreed that the historic 3-mile limit from national shores did not offer the answer. Fishing boats roam far to sea these days, it was pointed out, and with modern methods of freezing, catches are made many miles from shore. One proposal was for international agreements in relation to each species of fish, in place of the customary territorial agreements and this is based on the fact that some fish species, such as tuna, roam hundreds of miles from shore and pay no attention to off-shore areas of different nations.

Frank W. Wilkisson, New York, was named the fisheries industry man of the year and Capt. John Murley, salty old-timer of New England fishermen of New Bedford, Mass., was named the "King Fish" of the year.

A plan for teaching babies to like fish as a means of cultivating larger consumer liking for fish products was made by one of the fishermen.

In accepting the presidency of the Institute for the coming year, Mr. Alhadeff called on the industry to give more attention to research, higher quality, better packaging and aggressive advertising and promotion as a means of enlarging consumption of fish products and raising the stature of the industry in American business.

"There is no reason why the fisheries industry, one of the oldest industries in the nation, should not also be one of the largest and most progressive," said Mr. Alhadeff. "We have the products. we have the production facilities and the only reason we are not already far along the way to becoming one of the nation's most important food suppliers is that we haven't given the housewife enough products in the forms in which she wants them and haven't promoted our products aggressively enough. Through the National Fisheries Institute, as well as through our own individual companies we are now on our way to accomplishing these ends."

Newly elected officers of the Institute, other than Mr. Alhadeff, are: Chairman of the board, Royal Toner, New York; secretary, John A. Fulham, Boston; treasurer, George H. Thomas, Cincinnati; regional vice presidents, Sidney K. Jones, Boston; Frank W. Wilkisson, New York; A. B. Chauvin, Chauvin, Louisiana; Aldo Casaretto, Los Angeles; Maurice Rattray, Washington, D. C.; and Wilson C. Smithers, Chicago.

Fleet's Hard Luck Holds

The extraordinary hard luck which has befallen the San Diego tuna fleet thus far this season shows no signs of abating, according to skippers of fishing craft returning to port. Crews literally are losing their shirts because of the failure of the clippers to obtain decent catches even though they roam the fishing banks from the Gulf of California to the southern boundary of Peru.

The crown for ill-luck probably goes to the tunaboat *Oceana*, whose crew came dejectedly into the harbor yesterday after 70 days at sea, with only five tons. The *Daiho No. II*, another arrival, had 17 tons after a voyage of more than two months.

Meanwhile salmon fishermen in northern waters are reaping a rich sea harvest. Sockeyes are reported running well and fishermen are receiving $840 a ton for their catches, delivered either at dockside or to refrigerated ships.

Gene Mattson, president of the Mattson Sea Food Co. with offices in the B St. pier, predicted that San Diego Harbor will see few of the Alaskan fishing boats here for the 1952 albacore season, if the salmon fishing continues good.

"Normally the fishing craft from Ketchikan, Anchorage and other Alaskan ports begin to filter into the harbor here early in May in preparation for the albacore season," said Mattson. "Thus far I have received no word that they are coming." Mattson further predicted that if the present scarcity of tuna continues the albacore fleet, provided the long fins appear in large schools, will have one of the best seasons in many years.

Clipper "Constitution"

$500,000 Ship Built for Joe S. Rog to Fish for H

ONE of the largest tuna clippers afloat, the *Constitution*, slipped down the ways at Campbell Machine Company, in San Diego, May 1st, to the resounding cheers of more than 400 guests, and friends of the owners, after nearly 18 months under construction at this famous shipyard.

Harold Cary, general manager of the American Tunaboat Association, acted as master of ceremonies, introducing several notables including Don Loker, of the French Sardine Company, for which the *Constitution* will fish; Frank Seifert, former San Diego city councilman, and present manager of National City; and Anderson Borthwick, president of the First National Bank, of San Diego, and chairman of the San Diego Harbor Commission.

Father Edward Creighton, of Saint Agnes Church, in San Diego, consecrated the vessel, after which Mary Alice Neves, wife of Manuel Neves, Jr., skipper of the *Constitution*, broke the traditional bottle of champagne across the bow..

Refreshments were served in the loft at Campbell Machine Company, and aboard the *Constitution* following the launching ceremony.

The new clipper *Constiiution*, one of the largest commercial fishing craft ever constructed on the West Coast, represents an investment of better than $500,000. The boat which incorporates many innovations in design and equipment has aroused keen interest among commercial fishermen everywhere.

The *Constitution* was designed by Campbell's naval architect E. J. Bertin and Manuel Madrugal, and was constructed under the supervision of these men and David C. Campbell, co-owner with his brother George E., of the Campbell Machine Company.

With a capacity of better than 410 tons of fish, the *Constitution* has an overall length of 150 feet, breadth 29 feet, six inches, depth 18 feet, nine inches, and has an estimated speed of 11 knots.

Managing owner of the new *Constitution* is Joseph S. Rogers, pioneer fisherman, and one of the leading executives in commercial fishing on the West Coast. Skipper of the new boat is Manuel Neves, Jr., and chief engineer is Arnold Neves. Both of these men are part owners of the *Constitution*. Other associate owners of the boat are Adelina Rogers, Joaquin Qualin, Alice Qualin ,Charles Marciel, Lucy Marciel, Vernon M. Brown, Eileen G. Brown, Robert D. Immenschuh, Jean C. Immenschuh, Thomas J. Olsen, Georgia Y. Olsen, J. C. Vinson and Mary E. Vinson.

The *Constitution* is considered one of the finest and most completely equipped tuna clippers ever to slide down the ways from a Pacific Coast shipyard. The boat contains all steel bait tanks and boxes, plus six steel combination fuel and brine tanks. A special feature of all thees tanks is protective metal spraying provided by the Clark Metalizing Company of Newport Beach, Cal., a proven process which assures these steel tanks of long-lasting protection against rust and the corrosive action of salt air and water.

The new clipper is powered by a gigantic Union Diesel, supercharged Model Z6, which developes 1000 horse power at 280 RPM. Pre-installation tests of this engine at the Union plant in Oakland showed that this supercharged Union Diesel is capable of developing more than 1200 horsepower. Auxiliaries are two 190 6-cylinder Union engines. There is also a stand-by Buda engine.

Galley of the beautiful new *Constitution* features gleaming stainless steel, with an all stainless steel galley range which was provided and installed by the Carlson Company of San Diego, a company which regularly provides the majority of the special all stainless steel ranges which are used on the better and larger clippers of the Pacific tuna fleet.

The *Constitution* has an unusually large cargo space, with approximately 15,574 cubic feet of refrigerated space. The large compressors used on the boat are products of the York Corporation. The majority of the electric motors used on the *Constitution*, were manufactured by the General Electric Company.

Hull of the *Constitution* is of all-wood construction, with special protective marine finishes manufactured by the Atlas Paint Co., and the Amercoat Paint Company of South Gate, Calif.

George E. Campbell

Joe S. Rogers
Managing Owner

Launched at Campbell's

nd Associates; as Packing

***Constitution* just after it had slid off the ways at the Campbell Machine Company.**

Diesel fuel and marine lubricants used by the new *Constitution* are products of the General Petroleum Company, and are supplied through the Fisherman's Marine Company of San Diego. Fuel capacity of the new clipper is 66,900 gallons.

A feature of the engine room on the *Constitution* is the special installation of water converters, manufactured by the Diesel Technical Service of San Diego, which will supply fresh water for the boat.

Among the many electronic devices used on the *Constitution* is Fathometer, manufactured by the Raytheon Manufacturing Company.

Two special Tuna Tenders, manufactured by the Driscol Bros. Boat Company of San Diego, are carried by the *Constitution*. One of the boats is a 15'4" with a Gray Marine 115 engine, and the other tender is a 17'4" powered with a Gray Marine engine with two-to-one reduction gear. Both of these tenders are equipped with stainless steel fuel tanks, monel metal shafting and geared steering—and are the standard tuna tenders which the Driscol Company manufactures for the tuna fleet.

Radar and radio-phone equipment for the *Constitution* was manufactured and installed by the Harbor Electronics of San Diego and features the newest electronic equipment available for ship-to-shore two-way communications.

Other products used on the *Constitution* and representing many of the country's finest manufacturers of marine equipment are:

Baldt anchors, Monel metal shafting, Goodyear Cutlass bearings, Walworth valves, Coolidge propellor and Wilford-White navigation instrument.

Also considerable equipment was supplied through the Nuttall-Styris Company, ship supply house of San Diego. Among these products are:

Desco Diving Equipment; drop-forged hardware; Proto tools, Gray Marine Engines for tenders; Hamilton Chronometer; Linen Thread Netting and Twine; Tubbs rope, Minnesota Mining safety-walk, Getty Brass Hardware and Amercoat paints. Nuttal-Styris Company also supplied complete navigation and chart libraries.

Finishing touches and small work is now being completed on the *Constitution*. As the *Pan-American* goes to press arrangements are being made for the initial "shake-down" cruise of the boat, and various trial runs, before its maiden voyage the latter part of this month.

David E. Campbell and Joe S. Rogers inspect huge Union engine of *Constitution*.

Know Your Seafoods

Large Variety for Daily Menus

by

VIRGINIA TAGGART

Pan-American Home Economist

Boullabaisse, originally from France but popularized in America by the chefs of New Orleans. Generous servings of this tasty fish soup accompanied by a green salad and bread sticks make a complete dinner or supper of high food value.

The waters of the world contain a vast number and variety of fishes, some of which are inedible, but most of which serve as food for man. Though the Greeks and Romans were not as advanced as the modern man in the art of cooking they recognized the value of fish as food. It is said that their gastronomic discernment was developed to such a degree that they were able to tell from the taste just where the fish had been caught. The modern homemaker does not need to perform such a feat, but it is true that few women know how to choose fish for freshness, for variety and for economy.

The inexperienced homemaker will be wise to select a reliable fish dealer and let him assist her in selecting fish. He can also suggest uses for some of his more economical varieties. Most people are in complete ignorance of the many

fishes of surpassing excellence. They do not realize that fish, whatever the kind, is a superb investment not only for a varied diet, but also for the sake of health, and that fish can be economically prepared in countless delicious ways.

Fish deteriorates and decomposes much more rapidly than meat, and is at its best when cleaned and cooked just after being caught. The best substitute for taking fish from the water directly to the pan is the modern refrigeration and freezing equipment used by the fishing industry. Packages of frozen fish filets now bring to those dwelling in the heart of America the many nutritional extras provided by seafood.

Through educational advertising homemakers will be encouraged to try an ever increasing number of fresh, canned, salted, smoked and frozen fish.

BOUILLABAISSE (bool ya bas)

Marseilles, France, is the "home" of this soup, chowder or stew. The original recipe called for twelve different kinds of fish, many not available to the American homemaker. Below are the original varieties, with corresponding English names or a suitable substitute. Also listed is a smaller group of fish and shell fish which make a fine "brew" that is simpler to prepare and the ingredients easier to obtain:

Baudroie (Frog-Fish, also called Sea-Devil.)
Congre (Conger, Conger Eel).
Dorade (Dory, also sometimes called John Dory).
Fielan (unknown in America). Substitute small eel.
Galiente (unknown in America. Substitute Grouper.
Grondin (Red Gurnard).
Langouste (Spiny Lobster).
Merlan (Whiting).
Rascasse (unknown in America). Substitute Sea Bass.
Rouquier (unknown in America). Eel may be used.
Sard (unknown in America). Substitute Haddock or Codfish.
Turbot (Turbotin, a young Turbot).

For the Americanized version use: A small lobster, fresh or frozen haddock, sole (flounder), salmon, sea bass, halibut (or sword fish), crab meat, and small shrimp. The fish should total six pounds, with approximately equal amounts of each fish.

Simmer together till vegetables are tender:
2 large onions.
3 cloves garlic, crushed.
2 or 3 tomatoes, peeled and diced.
Sprig of fresh thyme or about ½ tsp. of dry, ground thyme.
Sprig of fresh fennel or about ½ tsp. of ground fennel seeds.
Large sprig of parsley.
Large bay leaf.
Generous strip of orange peel.
½ cup of oil, preferably olive.
Good pinch of saffron.
Salt and pepper to taste.
Sufficient boiling water to cover the fish.
Add and cook five minutes over high heat:
The coarser varieties of fish.
Then add and cook at a racing boil five more minutes:
The remaining fish (if using crab and shrimp add them just before serving).

The purpose of the fast boiling is to blend the water and oil thoroughly.

Do not overcook the fish as it will break apart and spoil the appearance and the flavor. Be sure to taste test before serving.
Serve over or accompanied by:
Slices of French bread (a slice may be placed in each bowl and the soup and fish poured over it or the bread may be placed on a platter and the fish served over it and the liquid served in bowls).

Serves 8 to 10, generously.

Fish *The Complete Protein Food*

Need In All Daily Diets

by
John X. Loughran, Ph.D.

HISTORY repeats itself. A century may pass before the performance catches up with the promise, before the practical application matches the prediction. But progress often is achieved by putting to work a truth that has long been gathering dust in the archives of science.

The term *protein* was first suggested 113 years ago by an inspired Dutch chemist, G. J. Mulder, as a designation for a food substance that he found to be a universal component of all plant and animal tissue life, that he believed to be the very "essence of life" itself. He asserted to a forgotten generation that protein was "unquestionably the most important of all known substances in the organic kingdom and without it no life appears possible on our planet." This prediction by Mulder was at best, as we know, only an inspired and brilliant guess, for he had little of the evidence, and fewer of the facilities for gathering the evidence, that we have today.

Years passed along with further but incomplete investigations into the structure of the various protein secrets of life, until about the turn of the century another inspired investigator, M. Verworn, reaching out even closer to the truth, proclaimed in 1899 that "proteins are at the center of all organic life."

And now that century of time since Mulder has come full circle again. The man in the street may now learn in terms of better diet and better health what the Dutch scientist only faintly glimpsed during the infant days of food science.

Today, the most fertile field in world research is nutrition. Our new knowledge of *protein* nutrition especially fires the imagination when we see it translated into an improved and life lengthening daily diet. For you who read this, whether you are business man or scientist, housewife or artist, what you eat today will be walking around, working, playing and paying taxes tomorrow. Hence the question, "Have you had your protein today?" is neither idle nor meaningless. The question means how much vitality do you want, how much *needless illness* do you aspire to avoid? In short, the protein quota of your food today means the kind of tomorrow you are going to live through, a tomorrow full of satisfaction, better health and achievement if you are a liberal protein eater. On the other hand, if you are skimping on protein foods, ensuing days will likely be of the low-vitality kind when both work and play suffer, and the best thinking you are capable of seems unrewarding and unsatisfactory.

In the last few years, if you are the average American man or woman, you have been made conscious of the need for watching the vitamin and mineral angles of your daily food intake. This is all to the good, because we live so largely on processed food, refined bread stuffs, sugar and the like, that our diet needs to be guarded against deficiencies of at least a dozen vitamins and minerals. We all know that efforts have been made to improve vitamin and mineral quality of some low cost staple foods as is seen, for instance, in the fortification of oleomargarine with fish liver oils and in the addition of iodine to our table salt. Such restorations of substances lost in food processing is to be encouraged, although the attempt to convert too many of our foods into pharmaceutical products by adding this or that substance may be frowned upon.

With proteins our problem is altogether of a different nature. Our national difficulty is a *shortage* of *complete* biologic proteins in the daily food on both a quality and quantity basis, plus an excess of starchy and sugary foods. At the outset, remember that animal protein foods such as meat, fish, eggs and dairy products are for practical purposes the only *complete* proteins. Few people consume enough of such foods each day. We cannot eat protein foods like meat and fish in extra quantity today to take care of tomorrow. Complete protein food in sufficient quantity must be consumed *each* and *every* day. In the bank of protein health and vitality, the ledger sheet is closed out each day. There is no carry over of body protein inventories.

Physicians and food experts watching sick people day after day are impressed by the truth of the statement that no greater catastrophe comes to man than the loss of efficiency, the lack of initiative and the mental depression which accompany nutritive failure through protein deficiencies. More meat, fish and dairy foods in the diet has changed many a victim of borderline anemia into a man or woman of energy, high work output of brain and body and abounding health.

It may be wise to point out at this point that the current emphasis on vitamin and mineral supplementation of the daily diet has had the side effect of overshadowing the importance of the proper daily quotas of the vital proteins of meat, fish and dairy products. Vitamins and minerals, regardless of quantity consumed can accomplish little in health building in the face of insufficient protein food intake. Many people eagerly searching for improved health via the vitamin-mineral route, might find to their surprise and profit that the addition to the daily food intake of an extra two ounces of meat and fish might easily accomplish *what the vitamin tablets did not.*

In the present world food crisis with its increasing difficulty in securing adequate amounts of animal proteins, there is naturally a growing interest in the virtually inexhaustible supply of proteisn of ocean origin. As the quality of *meat* proteins tends to deteriorate because of the increased unnatural com-

(*Continued on page 25*)

NEW

Fish and Wild

Portion of a typical catch of longline tuna on board the vessel *Hugh M. Smith.*
—(Photograph by Dixon Stroup)

A POTENTIAL new source of tuna has been located in the Central Pacific by the U. S. Fish and Wildlife Service's Pacific Oceanic Fishery Investigations, directed by O. E. Sette. These rich new tuna grounds are in a zone running east and west, parallel to the equator and somewhat north of it. Actual catches so far have been best between 1° and 6°N., but probably the zone shifts north and south with the ocean currents. In an eastward direction fishing has been done between 150° and 165°W. It remains to be found out how much farther to the east and to the west the tuna concentration extends.

Surface schools of small and medium-sized fish familiar to West Coast live-bait and purse seine fishermen are scarce in the zone, except in very small areas immediately around the small islands such as Christmas, Fanning, and Palmyra. Away from such islands surface signs of fish are almost nonexistent. But regardless of islands, the medium and large tuna that swim at depths of 100 to 400 feet are plentiful everywhere within the zone. These deep-swimming tuna cannot be caught by conventional live-bait fishing and purse seining, but were readily taken by longline gear, called "flaglines" in Hawaii.

That there might be such a zone of tuna concentration was first suspected because hydrographic data showed a band of "upwelling" along the equator. "Upwelling" is a term used by oceanographers to describe the rising of water from the depths of the ocean to the surface. The deeper water is rich in nutrients and when it gets close enough to the surface to be reached by sunlight, minute plants thrive in it. Microscopic animals feed on these tiny plants, and they in turn become food for fish. Because of this, the abundance of all fishes depends on the amount of nutrients in the water, just as the yield of a crop on land is controlled by the fertility of the soil. Upwelling, incidentally, is largely responsible for the rich fish resources along the California coast.

Oceanographic evidence shows that rich water rises toward the surface at the equator, flows north, and then sinks down again. The location of this sinking is variable and it is sometimes strong and sometimes weak. Although the causes of the upwelling and sinking have not yet been fully explained, it is connected with the southeast trade-winds and it unquestionably is going on most of the time. The minute animals of the ocean called "plankton" were quite clearly multiplying very vigorously in the equatorial zone of upwelled water with its store of nutrients, for tow nets hauled in the zone caught several times more plankton there than in the waters immediately to the north and south. Having learned this much, the next question was whether or not tuna would be as strikingly abundant in this rich zone. We had already found surface fish to be abundant close to the islands in this area, but not more than a few miles away from land.

To answer this question, the research vessel *Hugh M. Smith* made a longlining cruise in October and November of 1950. During this cruise, 27 locations were fished between 157° and 168°W., crossing the equator once at 158°W. Tuna were captured at the rate of 3.00 per hundred hooks per day of fishing north of the rich zone and 9.26 per hundred hooks within the rich zone. Despite the fact that this first cruise was a trial of several kinds of longline gear, some of which did not operate satisfactorily, the results were very encouraging. Most important, it proved that knowledge of the current system and its effects on plankton could lead to finding fish concentrations in the equatorial Pacific.

During August and September of 1951, the *Hugh M. Smith* made a combination hydrographic and longline fishing cruise along the meridian of 150°W., and along the parallel of 2°N. between 150° and 158°W. This cruise was designed to record the hydrographic conditions and the abundance of fish simultaneously. The locations fished and the results obtained are shown on the accompanying figure.

At the 12 stations to the north and south of the rich area 31 yellowfin tuna, 44 big-eyed tuna, 4 skipjack, and

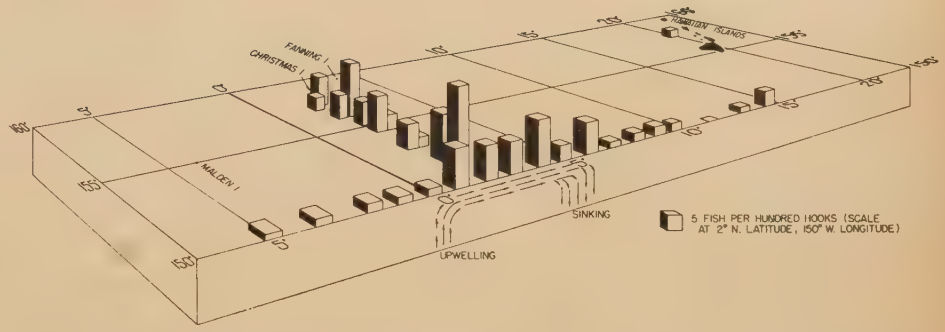
TUNA SOURCE

rvice's Investigation Reveals Potential New Grounds

4 albacore were caught for an average catch of 2.86 tuna per hundred hooks. At the 16 stations, within the rich area 427 yellowfin, 50 big-eyed tuna, 19 skipjack, and 3 albacore were caught for an average of 12.9 tuna per hundred hooks. The most spectacular catch consisted of 72 tuna, 71 of which were yellowfin. The yellowfin taken on this cruise ranged from 30 to 190 pounds, with an average weight of 124 pounds. The big-eyed tuna were somewhat larger, and the skipjack and albacore were, of course, a good deal smaller. In summary, fishing in the rich band yielded an average of 12.9 tuna per hundred hooks, weighing a total of 1,600 pounds. Outside of the rich zone, the catch per hundred hooks was 2.86 tuna, weighing 360 pounds.

The longline gear used on this cruise was developed by the staff of the Pacific Oceanic Fishery Investigations as a modification of the gear used by Hawaiian and Japanese fishermen. The entire set is divided into units called "baskets." Each basket has 6 hooks, which are baited with frozen sardines toughened by soaking in heavy brine. The mainline of each basket is set slack, so that it sags down 300-400 feet halfway between buoys, with hooks fishing at various depths from 130 to about 500 feet. The *Hugh M. Smith* fished 40 baskets of gear, or 240 hooks, at each station, the lines being set at dawn, and the first basket being retrieved shortly after noon. The last basket was brought aboard around five in the afternoon, after which the *Smith* proceeded to her next station. A Japanese line-hauler was used to retrieve the lines. The handling of this gear, though simple in principle, requires great dexterity and exact timing on the part of the fishermen.

There are some comparative data available with which to evaluate the richness of this area and the performance of the longline gear. In the far western Pacific a number of post-war Japanese mothership expeditions have averaged about 3.13 tuna totaling 250 pounds per hundred hooks. A typical Japanese longliner might weigh 150 tons and carry 25 fishermen. This vessel would fish about 2,000 hooks, and at the above rate would average about 5,000 pounds of tuna per day. This is a low return per man and this return is acceptable only because Japanese fishermen receive low pay and are willing to work excessively long hours.



Diagrammatic representation of the Central Pacific showing the locations fished during the fall of 1951 and the relative sizes of the catches. Note that the heavy catches coincide with the presence of upwelled water.

The question of whether these richer grounds south of Hawaii could support American living standards has to be answered in terms of how much gear could be operated and how much it would catch.

The *Smith* is a clipper-type vessel and very awkward to handle when hauling in longline. Our West Coast purse seiner type would be much handier and we think such a vessel with an American crew of 12 men could fish at least 600 hooks a day. Fishing in the rich latitudes in the neighborhood of 150°W this would bring in 9,600 pounds of tuna per day, providing the tuna were present in the abundance experienced during the last cruise of the *Smith*. This is about 4 times more per man than the typical Japanese catch.

The estimated catch of the American boat is based on what is actually relatively crude, unimproved gear, and it would be surprising if ingenious fishermen could not raise its efficiency. It is likely also that further biological study of the tuna will also help improve the catch, especially in regard to such problems as the best depths for fishing in various parts of the current system. A feature in favor of the longline is the relative steadiness of the catch. There are variations in the catch rates of different vessels, as there are in all fisheries, but some problems, such as procurement of bait and location of surface schools, are absent, so that once a productive ground is located, it can be worked with a reasonable assurance of catching fish. Even much of the trial and error in finding productive grounds is eliminated through the knowledge of

(*Continued on page 16*)

The *Hugh M. Smith*, one of the Fish and Wildlife Service's research vessel stationed at Honolulu. —(Photograph by M. B. Schaefer)

CALIFORNIA TUNA PRODUCTION TUMBLES 43.7 IN FOUR MONTHS

California's tuna production dropped 43.7 per cent in the first four months of 1952 while imports were going up 56.3 per cent over the 1951 period, the California Fish Canners Association reported today. The figures were included in a communication sent to the Senate Finance Committee in Washington. The committee is expected to report on, this week, a bill calling for 3c a pound tariff on fresh and frozen tuna imports. The measure already has been passed by the House.

Tuna production figures, compiled from official records of members of the Association who pack 95 per cent of the California yield, showed that for the first four months of this year canners processed 15,528,000 pounds against 27,572,000 produced in the comparable 1951 period.

Sales dropped 8.1 per cent, the Association reported, going down from 41,625,000 pounds to 38,250,000 lbs.

Most alarming figure, tuna officials said, was the heavy increase in imported types of tuna. Imports of tuna canned in oil or brine increased from 1,949,000 pounds last year to 5,650,000 pounds for the first four months of 1952. Imports of fresh and frozen tuna increased from 10,690,000 pounds in 1951 period to 10,930,000 pounds this year.

SALMON MIGRATION ROUTES PLOTTED

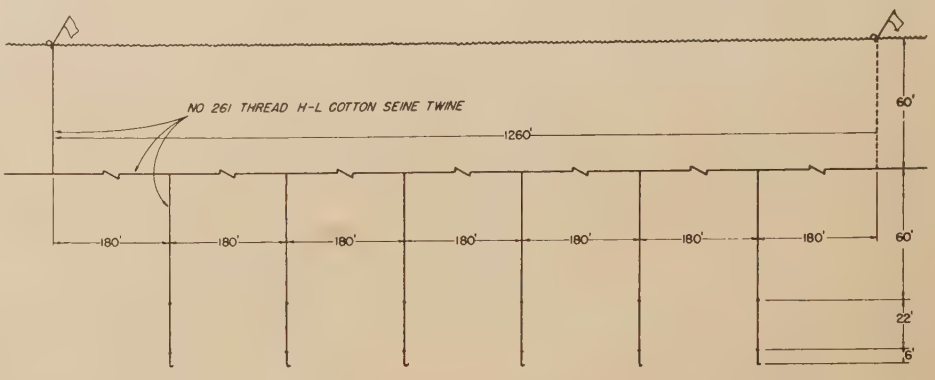
Plotting of the migration route and survival rates of Washington chinook and silver salmon will be intensified this year with the marking of 1,500,000 downstream migrants at six state salmon hatcheries.

Two lots totaling 600,000 chinook fingerlings will be released in the Kalama river, and two of 200,000 each in the Green river. At the Minter creek research station near Gig Harbor, where the department is conducting long-range studies on migrant survival, 240,000 fish will be used. One hundred thousand have been alocated for the Cedar river in King county.

More than 150,000 marked chinook, sockeye and silver migrants also will figure in experiments on the Elwha river, near Port Angeles, and Baker river at Concrete, to measure the losses of small fish incurred in passing power dams. The studies are an initial phase of a new research program aimed at development of safe passage facilities for fish at high dams.

Supervisor of Research Donald R. Johnson announced that marking of feeding silvers will be tried on a large scale for the first time this summer, using reefnet gear at Bush point, Whidbey island. Tagging of adult salmon will be conducted there during the same period.

The fish are marked by clipping off one or more fins. Their recovery in the commercial and sports fisheries and in their home stream allows a measurement of survival, growth and migration routes, and the effectiveness of artificial propagation.



Diagrammatic sketch of a "basket" of the longline gear used by Pacific Oceanic Fishery Investigations.

New Tuna Source

(*Continued from page 15*)

the oceanographic and biological conditions that make for richness.

Aside from questions of the efficiency of the longline gear and its productivity in economic terms, there are a number of important things to look into. Prominent among these are the following: What is the seasonal variation in abundance of the tuna in the "rich zone?" And, what are the eastern and western limits of equatorial concentration of tuna? The two cruises on which this article is based took place in the late summer and fall. While there is good reason to believe that seasonal fluctuations in the abundance of longline tuna in the equatorial regions are slight, only fishing throughout the other months of the year can prove it. Similarly, no exploratory fishing has been done east of 150°W., but there is an indication in data on the Southeast Trades that suggest yellowfin tuna should be more abundant to the east of 150°W.

Work is planned by the Pacific Oceanic Fishery Investigations toward getting answers to these questions. During the first half of 1952 the *Hugh M. Smith* and the *John R. Manning* will continue to do hydrographic work and fishing along the equatorial zone between 130° and 180°W. longitude. In this manner, the powerful tool formed by integration of fishing, oceanography, and biology will continue gathering information for the ultimate expansion of the high seas tuna fishery.

Urged To Secure Port Cards

Comdr. Charles E. Sharp of the Coast Guard Air-Sea Rescue Station recently urged longshoremen and fishermen to obtain their port security cards as quickly as possible.

"These cards are absolutely necessary to obtain access to restricted harbor and waterfront areas because they identify the bearers as having been screened for security purposes," said Sharp.

The Coast Guard said that applications for the port security cards may be filed in customs offices in the basement of the Federal Building, 325 W. F St.

Sharp pointed out that an emergency may arise which would cause the Coast Guard to restrict access to a number of waterfront areas. "Just want to be prepared so as not to hinder the operations of longshoremen or fishermen," said Sharp.

Later other waterfront workers will be asked to obtain their security cards.

PROGRESS & PRODUCTION

- **CHAMPION CO.**
- **UNION DIESEL**
- **VERTEX**
- **YORK CORP.**
- **SEAPAK CORP.**
- **CHRIS-CRAFT**

HANDY ENGINE INFORMATION:

A new pamphlet offering handy data on every known type of boat engine—inboard and outboard—is now available from Champion Spark Plug Company.

Prepared by Champion's engineering staff, it contains an easy-to-read specification sheet showing recommended types of marine spark plugs plus proper spark plug and breaker point gap settings for boat engines. In addition it lists correct oil-fuel mixes for every engine model, as recommended by each of the outboard manufacturers in this country and Canada.

Of special value to boat owner and mechanic alike are several charts showing heat ranges of both regular and racing type spark plugs with accompanying hints on determining the proper type for individual engines. Instructions for correct installation of plugs also are provided.

The pamphlet may be obtained without cost from the advertising department of Champion Spark Plug Company, Toledo 1, Ohio.

TURBOCHARGED UNION:

A particularly fine conversion of a United States Navy Mine Sweeper, YMS, into a marine work horse for the fishing industry, has been accomplished by British Columbia Packers Ltd. It works for and with their many fishing operations all along the British Columbia coast to Alaska. The *Cloverleaf*, as she is now known, carries 300 tons in her two hatches. Furthermore she tows a loaded scow or barge which carries an additional 500 tons or more. This pair goes on trips of a thousand miles or more.

Fishing boat *Marseguerra* operating out of Monterey, owned by Frank Marseguerra of Monterey is equipped with a Caterpillar Diesel D4600 Marine Engine.

Cloverleaf and her scow take north to the fishing plants whatever goods and equipment are necessary including materials to build the plants, to maintain them, to catch the fish, to process it and finally the *Cloverleaf* hauls the finished fish products to railheads. She also provides accommodations for transporting personnel to, between and from fishing camps and canneries.

Experience had proven to B. C. Packers Ltd. that the first thing which they would have to do in making this fighting vessel into a work horse was to remove the high speed engines and replace them with a single, heavy duty, moderate weight engine intended for subject service. They selected and installed a turbocharged Model P6 Union Diesel. This diesel is rated to be operated at 750 horsepower at 500 RPM but it is capable of developing much more power when desired or necessary. Conversion work in Vancouver was completed so that trials were conducted on March 15, 1952.

Extremely satisfactory trials were conducted. She made good over deep water measured mile course 11½ knots at standard speed, 12¼ knots at flank speed. The many admiring visitors, most of whom are in the fishing industry in British Columbia, expressed their belief that there was no finer vessel in the Pacific Northwest and few if any finer or more functional anywhere in the British Empire. Her utility has been proven on her maiden voyage. She was able to transport nearly 1,000 tons of cargo in her holds and on a scow up the British Columbia coast several hundred miles at a speed of nearly 8 knots.

This is the first turbocharged Union Diesel to be installed in British Columbia. It is also the first new turbocharged diesel engine of any make to be installed in a vessel in British Columbia.

NEW VERTEX BOOSTER:

A self-contained vibrator type electrical unit to overcame difficult starting conditions is announced by Scintilla S. A. developed especially for use where an electrical self-starter cannot crank a very high compression engine fast enough to energize a Vertex Magneto. This booster is said to provide a very hot spark at the plugs even at zero r.p.m. It is connected between a six or twelve volt battery and the magneto and is energized usually by an ordinary push button switch. Boosters may be installed at any time, have long been standard equipment on aircraft magneto ignition systems, are now available from all Vertex dealers at nominal cost. For more information write F. T. Griswold Mfg. Co., (sole Scintilla S.A. distributor in this country) W. Lancaster Ave., Wayne, Pa.

NEW TARE BEAM SCALE:

The Ohaus Scale Corporation of Union, New Jersey announces the addition of an undivided tare beam to its Triple Beam Balance.

(*Continued on page 21*)

Mackerel Disappearance

Landings Now Lowest Since 1932

The Pacific mackerel at one time a multi-million dollar fishery on the California coast, for the past ten years has been fading rapidly towards ultimate destruction, according to State marine biologists. The following article prepared by the California Department of Fish and Game has been released after a ten year study of the situation.

•

MARINE biologists of the California Department of Fish and Game are looking with alarm on the disappearance of the Pacific mackerel. Once a multi-million dollar fishery, recent commercial landings of mackerel at California ports are the lowest since 1932. Symptoms of a sick fishery have been diagnosed by the state specialists for several years.

Los Angeles has always been the center of the mackerel fishery, with Newport Beach an important harbor since 1935. First the lampara and then the purse seine fleet dominated the fishery at Los Angeles.

Newport Beach was the province of the small boat operator employing the technique of "sticker" fishing, from which evolved the technique of "scooping." By the late '30's the seine fleet was no longer able to meet the demands of Los Angeles harbor canneries and the small boat fishery expanded tremendously. Despite this, the trend of the catch has continued downward.

During their abundance, the Pacifics were fished from May through the winter. In recent years most of the fishing has been concentrated between Labor Day and Christmas. The 1951 season, however, ended in early November. There just weren't any Pacifics to catch.

What are the reasons behind the virtual disappearance of this distinctive California species?

A crew of the Bureau of Marine Fisheries researchers under the supervision of Biologist Phil M. Roedel, has been studying the Pacific mackerel's movements, reproduction and habitat for a decade, from the Department's Marine Fisheries Laboratory at Terminal Island and aboard research vessels at sea. Although they have no positive answer—at least they are willing to submit "an educated guess," based on catch, population and age studies they have completed.

The fading fishery has fluctuated in cycles of at least a decade—from population peaks of highly rewarding fish ing seasons—to depressions when they have virtually disappeared. But for the past 20 years the charted peaks of their abundance have been lower, and the plateaus of their absences from the fishing grounds longer and deeper.

"Spawning was good in 1947 but today this class, which produced a major portion of the year's catches from 1948 to 1950, is 'cleaned out.' What remains of the fishery is dependent on three-year-olds as its largest and 'oldest' fish," Roedel reveals.

Yet it takes the Pacific mackerel two years to become sexually mature—able to reproduce its species.

"The reserve spawning stock more than four years old has dwindled until in 1950 and 1951 less than three percent of the Pacific's take were four years old or older" he adds. "The greatest contribution by any single year class was that of 1941 which produced 130 million fish weighing 109 million pounds."

Compare that with the 1951 catch which, when all returns are in, will fall short of 30 million pounds, the biologists estimate.

In the words of the scientists, "The future of the Pacific mackerel in California is not bright. The fishery during the past 10 years has been fading rapidly toward ultimate destruction."

Is there a conservation program that can be made effective—at this late date—which might ultimately restore the Pacific mackerel fishery?

Department specialists, faced with a similar dilemma in the California sardine fishery, believe both fisheries can eventually be rehabilitated and restored to economic importance under a sustained yield, annual harvesting program. But only if all segments of the fisheries and their dependent industries will agree on seasonal bag limits that will fluctuate from year to year, and which would be mutually agreed to by fishermen, canners, reducers and the public.

The limits would be set upon recommendation of marine scientists specializing in mackerel and sardine studies and would depend upon such data as population and age samplings, migration research, "availability" of the fish populations to the fishermen, and other factors.

It may be a long, slow haul, the biologists believe, but there is no reason a sustained-yield based on intelligent, mutually-acceptable planning, cannot rehabilitate California's greatest potential resource, the marine life in her coastal waters.

Marine Scientists Study Vast Ocean Areas

A 4,000,000-square mile area of the Pacific Ocean, which now is almost a complete blank on the navigational and research charts of the world, is now under study by a group of West Coast marine scientists.

The area extends fanlike from the approaches of the Panama Canal, and includes waters of the eastern equatorial Pacific off Central America and northern South America.

The findings will affect many Americans, including the housewife who makes a tuna salad, navigators aboard ships that follow Pacific shipping lanes, and shipwrecked mariners or passengers of crashed airplanes.

The projects involve ships and scientists of the Naval Electronics Laboratory at San Diego; the Scripps Institution of Oceanography; the Inter-American Tropical Tuna Commission and the U. S. Fish and Wildlife Service. The Tuna Commission is a joint venture of Costa Rica and the U. S., and is concerned with the life, habits and psysiology of the tuna.

One vessel already has left San Diego for a 10,000-mile research venture. It is the EPCE (R) 857 of the Electronics Laboratory, which will concentrate its work along the shipping lanes of the eastern equatorial Pacific. Scientists aboard will conduct experiments in the speed of underwater sound transmission, and will measure ocean currents at various depths to 400 meters.

Of more interest to the average American, perhaps, is the project outlined for those aboard the Scripps vessel, the *Horizon*, which is scheduled to depart San Diego about May 15. She will concentrate on studies of equatorial ocean currents, but Inter-American Tropical Tuna Commission biologists will be aboard to gather data about the tuna population for later relay to skippers of the clippers that base here or in San Pedro, Calif.

Comparatively little is known about the tuna so far. Earlier research has established that great schools of the fish live, spawn and hunt in a 700-mile wide band extending northward from the equator, and to within at least 1500 miles of the central American coast. In this band there are many ocean currents which, when they meet, boil upward, bringing food of various types for the tuna.

Commercial fishermen are anxious to know whether this band of tuna extends eastward to Central America. This information is of great potential dollars-and-cents value, for it could mean that the fishermen, after obtaining bait, could head directly for tuna-heavy fishing banks, fill their holds rapidly, and return to port without delay. Such operation would reduce the per unit cost of catching tuna and, in turn, could well shave the ultimate cost of canned tuna on the retail shelves of the nation.

In the sound experiments, small depth bombs will be dropped at specific locations to test and evaluate a search and rescue network established by the Navy. This system spans the Pacific from Hawaii to the west coast of California. Long-distance transmission of sound between refracting "layers" of water is a basic principle of the system, which scientists hope some day may be used in sea disasters to pin-point locations of wrecks or survivors. So far, longest sound transmission by use of this service has been 3500 miles.

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San Diego Harbor Board Plan Expenditures of $880,000

Expenditures of $880,000 on 42 projects is planned by the Harbor Department for the period starting this month and extending through to June, 1953.

The Harbor Commission has awarded a $63,865 contract to the Johnson Western Co. for renewal of the fender system and other improvements on the Broadway Pier. Recently completed was a new fender system for the B St. Pier and along the Embarcadero from the pier to the customs office opposite the Civic Center.

Another $12,130 contract was awarded the Rogers Construction Co. for a concrete-block wall and chain-link fence at Lindbergh Field. The commission has allocated $20,000 for a fire station at the municipal airport and has ordered the United Airlines office building moved from the vicinity of the reconstructed administration building to the west end of the airport. United now has offices in the new administration building.

A total of $618,000 has been set up in the 1952-53 budget for projects in the following areas, according to Port Director John Bate:

Municipal yacht harbor and Shelter Island—Construction of mooring piers and floats at the outboard end of the island; installation of sewers, water mains and underground electrical and telephone lines; landscaping and tree planting.

Twenty-eighth St. Pier and vicinity—Paving of the pier and its approaches paving of Chollas Lane, install curbs, sidewalks and paving on Belt. St. south of Twenty-eighth; complete the Belt St. sewer system from Belt to the Westgate-Sun Harbor Co. cannery.

Tenth Ave. Pier and vicinity—Pave 200,000 square feet of the pier, install power and sewer lines, storm drains and construct roadway connecting pier with Eighth Ave.

Other projects provide for the resurfacing of Harbor Dr. from Market to Ash Sts.; installation of curbs from Ash along the Embarcadero as far as the Coast Guard air-sea rescue station; repaving of the promenade desk of the Broadway Pier; paving an area adjacent to Piers 4, 5 and 6 in the municipal commercial boat basin.

Also, repainting of the freight sheds of the B St. Pier; installation of curbs and paving on Shelter Island and alterations to the State Highway Building at Harbor Dr. and Ash St. preliminary to moving the Harbor Department offices from the foot of Broadway to Ash St. after the State Highway Department vacates its building in September.

The city is purchasing the State Highway Building. State highway engineers are to move to new quarters at Old Town.

Soon after July 1 to the Harbor Department plans to award contracts for repairs to the Market St. fish pier, for dredging in the yacht harbor, and paving the apron at the municipal airport to facilitate handling of air freight. Estimated cost of the apron paving project is $54,000, of which $25,000 is expected to be provided by the Civil Aeronautics Administration.

DRIVE CONTINUES FOR TUNA LEGISLATION

The Southern California fishing industry today launched a drive toward a showdown Senate Finance Committee vote on tuna tariff legislation.

Pushing for the vote on a House-passed bill to impose a 3-cent-a-pound tariff on imported fresh and frozen tuna are George Baker, business agent for the International Association of Machinists, San Diego, representing fishing boat engineers, and Tex Ellington, of Van Camp Seafood Co., San Pedro, representing the California Fish Canners Association.

Charles E. Carry, chief of the National Canners Association fisheries division, said the industry now is ready to "camp on the committee's doorstep until it takes some action" on the measure which has laid untouched since hearings ended February 7.

The industry spokesmen will call on Sens. William F. Knowland and Richard M. Nixon (R-Calif) to demand a showdown.

Chairman Walter George (D-Ga) has held up action the last 2 weeks on the excuse that Sen. Eugene Millikan (R-Colo), ranking minority member on the committee, has been campaigning in his home state. Millikan, chief committee supporter of the tariff legislation aimed at curbing the flow of imports endangering the economic existence of the San Diego-San Pedro tuna industry, now has returned to the capital.

As industry representatives rigged up an informal "lobby" to beat the drums for a committee vote, fears were expressed in some quarters that Japan's new independence had brought renewed State Department opposition to the tuna tariff bill approved by the House last Oct.

The department has been cool toward the measure from the first and has recommended a duty-free import quota before a tariff is imposed on raw tuna produced by foreign competitors. There were indications department officials are ready to apply new pressure on the Finance Committee against an outright tariff, on grounds such a law would tend to discourage Japan, biggest raw tuna importer, just as she is seeking to re-establish herself in world trade channels.

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Progress & Production

(*Continued from page 17*)

This feature will render the product useful in many laboratory and industrial applications where it is desirable to obtain net value of the product being weighed without further calculations. The empty container is balanced by use of the tare poise which can be locked on the undivided tare rod for repetitive weighings. The value read on the balance after filling the container thus represents only the material in the container.

The balance is equipped with stainless steel plate and etched stainless steel beams. It features a full load capacity of 2610 grams with a sensitivity of 1/10 gram. The balance is equipped with Ohaus patented self-aligning bearings and is finished in attractive and durable hammertone baked enamel.

In addition to the standard metric balance it can also be supplied in the avoirdupois or troy standards. Different types of weighing platforms such as removable brass scoop or removable pan can be supplied where necessary for various industrial applications.

For further information and free literature please address inquiries to Ohaus Scale Corporation, 1050 Commerce Ave., Union, New Jersey.

AUTOMATIC ICE MAKER:

An automatic ice maker, the smallest commercial type ever developed, has been placed in production by York Corporation, according to President Stewart E. Lauer.

This machine, to be known as the York-FlakIce Automatic Ice Maker, Model DER-2, is designed to produce up to 300 pounds of ice in small clear fragments per day without the use of an auxiliary crusher.

Lauer pointed out that this new machine was designed primarily to meet the increasing demands for equipment to produce ice in small pieces at the point of use by the smaller commercial establishments including bars, hospitals, soda fountains, hotels, restaurants, taverns, green groceries, chain stores, seafood houses, poultry stores and other handlers of foodstuffs, including the military, where the daily ice requirements usually do not exceed 250 to 300 pounds.

The product of the York-FlakIce Automatic Ice Maker, it was explained, is in a slightly curved form. Because of the greater exposed surface area, it provides faster cooling of liquids. These small fragments of ice are claimed to be so delicate that they won't bruise or puncture fish, poultry, or even roses, when used in bulk, such as in a shipping carton or crate. Meltage also is retarded because of the shingling action of the curved pieces of ice.

Lauer commenting on the new product said the unit was engineered for compactness, light weight, overall economy, sanitation and trouble proof operation. The refrigerant-freezing circuits operate as a unit, hermetically sealed. Through a unique freezing process air is freed from the ice and the chemical salts precipitated in the freezing process are carried off to the drain, resulting, he said, in clear, curved fragments of ice, purer than the water itself. Although the size and type of ice should readily replace, for any purpose, average size crushed ice as presently used, it is more effective in chilling liquids, for food preservation and many other applications.

The unit is air cooled and can be plugged into an electrical socket. It has a capacity range of from 200 to 300 pounds daily, although the unit itself is only 32½ inches high and its widest diameter is only 24¼ inches.

York Corporation, which manufactured the first self-contained automatic type ice machines more than 10 years ago, produces another ice maker, which

manufactures the cube with the hole. This machine is usually equipped with a crushing device to supply cracked, or crushed ice.

NEW SEAPACK PACKAGE:

The SeaPak Corporation has repackaged its leading nationally distributed product—breaded fantail shrimp—in an entirely new package that features in lifelike color photography, the product ready for the table.

SeaPak will launch other new products this summer and fall. All will carry the new family design with appropriate color changes from product to product. These color changes will add variety in the frozen food cabinets as well as become a color coding system for quick recognition of the different SeaPak products by consumers.

The basic design is printed in five colors by the gravure method on waxed overwrapping material over cardboard boxes. The new package, designed by Gordon Baird Associates, New York City, is manufactured by Marathon Corporation, Menasha, Wisconsin.

The new SeaPak package is designed to provide maximum effectiveness for two basic selling features—eye-catching display of bright colors on the whole package, and a large, lifelike full color illustration of the end use of the product.

VERSATILE CRUISER:

Originally designed to meet the demand for a medium-sized pleasure cruiser well within the means of the average man the new Chris-Craft 31′ Express Cruiser Boat Kit has proven its versatility by virtue of its efficient handling of many commercial fishing jobs.

The design of the Chris-Craft 31′ Express Cruiser Boat Kit incorporates pleasant living facilities in an enclosed cabin and sufficient deck and cockpit space for handling fishing gear. A good illustration of the versatility of this boat can be seen in the various Gill Net Cruisers now at work along coastal waters.

The Chris-Craft 31 has a beam of over 10′ and lends herself readily to the gill net operation after the skipper has installed gill net equipment. At the close of the fishing season the decks can be cleared to provide the fisherman with a deluxe pleasure boat.

The enclosed cabin forward can accommodate galley, dinette, toilet, two berths and ample locker space. The large open deck aft measures approximately 8½′ x 12′ and should be big enough for most job usually assigned to commercial boats her size.

All structural parts are solid Philippine mahogany and decks, floors, cabin top and side panels are of heavy fir marine plywood. The bottom is double planked with ¼″ plywood inner planking and ½″ mahogany outer. A complete stock of no-ferrous fastenings is included with the packaged kit along with all glue, seam and bedding compounds, Chris-Craft decals and screw driver and driver bits.

The kit is furnished with engine stringers for either twin or single engine installations and with top power the 31′ will do a fast 32 m.p.h.

CANADA ACTS

Canadian participation in the proposed fisheries treaty among the United States, Japan and Canada is being discussed by the House of Commons Fisheries Committee.

The house recently referred the subject matter of the treaty to the committee, meaning members can debate the matter but not act on it.

The treaty is not yet formally before the house, and the Commons move was a way of getting the question under discussion before a ratifying measure actually comes up.

EBB'N FLOW

(*Continued from page 8*)

degree in mechanical engineering, Spitzer served three years in the U. S. Air Corps before joining Caterpillar in 1950 as a college graduate trainee, later being assigned to the sales engineering division of the company.

APPEAL FOR HELP

Information Wanted:

In order to support its current case against the California-Oregon Power Company, the Department of Fish and Game has issued an appeal for help from California anglers or outdoorsmen whose lives or equipment have been endangered by sudden fluctuations of the Klamath River.

Witness reports, made either in person or through deposition, are needed to support the State's suit, which charges "needless destruction of fishlife and jeopardy of public safety caused by abnormal fluctuation of the Klamath River below the COPCO dam."

Deputy Attorney General Ralph W. Scott, counsel for the California Fish and Game Commission, stated that witnesses living 100 miles or more from Yreka need not appear at the trial.

Written depositions describing fish deaths or hazards to public safety will be accepted.

Witnesses were asked to write their experiences in a letter to the California Department of Fish and Game, Ferry Building, San Francisco.

CONSERVATION

100 Years Old:

The first of California's salmon conservation laws was 100 years old on April 12.

In its third session, the California legislature called upon "all good citizens and officers of justice" to "remove, destroy, and break down any weir, dam, fence, set or stop net, or other obstruction to the run of salmon in any river or stream."

The fine for violation of the law was set between $100 and $1,000.

The need for conservation of the state's valuable salmon resource was recognized in 1852 as well as today, when the pioneer legislators closed the river netting season during the months of January, October and August.

The first California game law, protecting elk, deer, antelope, quail, mallard and wood ducks for six months each year, was also enacted by the 1852 session.

SONAR FISHFINDER

Another Gadget:

A new gadget, which may revolutionize commercial mackerel and sardine fishing is being tested off the California Coast.

The new invention, developed by Maxwell Zeigler of Gardena, California is called a sonar fishfinder.

Zeigler believes his variation of the sonar gear used by the Navy in anti-submarine warfare, will make it possible for fishermen to locate schools of fish, during adverse fishing conditions.

At the present time, sardine and mackerel fishing is limited to dark of the moon periods, when there is not enough light on the ocean to interfere with fishermen spotting schools of fish from the phosphorescent wake they churn.

"Fire on the water" is what the commercial fishermen call the phosphorescent glow indicating presence of fish on dark nights.

Up-to-date fishing craft going in quest of sardines and mackerel have fathometers, which reveal schools of fish directly under the boats but nowhere else.

The new device operates on the same principle but with far greater power, sensitivity and reception. Its electrical impulses are sprayed in front of the boat and slightly down.

This means that the impulses in contrast with those from fathometers and radar detectors are projected at an angle and must return through the water at an angle.

The returning impulses should provide answers to the following questions:

In what direction is the school of fish?

How far away is it?

How dense is it?

Which way is the school swimming?

In a preliminary test, the new sonar device detected a three-fourths-inch rope at 400 feet and a bulkhead under water at 3000 feet.

Zeigler, assisted by Dr. S. M. Jacobs, of Alhambra, has made the fishfinder so sensitive that it can locate anchovies hundreds of feet away. They believe it will be able to locate any kind of fish in which the commercial fisherman is interested.

It is 549 times as powerful as the fathometer used on purse seiners, Zeigler declared.

It sends out five-foot sound impulses at 50,000 cycles a second. It scans half a mile of ocean, intersecting the water at a point 10 fathoms down at a distance of a quarter-mile from the vessel.

Skipper George Felano of the San Pedro purse seiner Oakland, used in tests, says all he has to do is press a button alongside a dial and the device begins operating. It is constructed to sound a buzzer when it finds fish.

Zeigler estimates a boat can be outfitted with the new device for "considerably less than $5000."

NEW MANUAL

5000 Items:

For those who sell their products to the government, the revised edition of the Government Procurement Manual should be especially helpful. When the manual was recently released by the Department of Commerce, Secretary Charles Sawyer described it as "the only source of information in the federal government covering the procurement activities of all major military and civilian agencies."

The manual lists 5,000 items and classes of items for which federal agencies are in the market. It contains a military agency and a civilian agency index together with a listing of the locations of the appropriate procurement offices.

According to Secretary Sawyer, this publication "represents many months of cooperative effort among the office of small business, national production authority, and military and other civilian agencies in gathering and organizing current procurement data."

The manual is being placed in Department of Commerce field offices throughout the country, and in local chambers of commerce where it can be consulted by businessmen interested in obtaining a government contract. Copies are available at the offices of the small defense plants administration, and at all principal purchasing offices of the military and civilian agencies.

Oyster Production Down

Washington state oyster production during 1951 amounted to 44,443,244 pounds with a wholesale value of $3,335,396. In bushels total was 792,352.

This compared with the 1950 production of 47,808,600 pounds worth $3,927,048.

By areas, Puget Sound produced 10,797,813 pounds of Pacific oysters worth $486,384; Grays harbor produced 1,299,700 pounds worth $103,976, and Willapa harbor harvested 31,749,906 pounds with a value of $2,539,992.

In addition, a total of 585,825 pounds of native Olympia oysters worth $205,044, approximately equal the 1950 production of this species, was produced.

The totals were computed on a basis of 60 pounds to a bushel of Olympia oysters and 50 pounds to a bushel for the Pacific species. Values were calculated on a basis of $21 a gallon for Olympias and $4 a gallon for Pacifics.

EBB'N FLOW

(Continued from page 22)

Plant Deal:

A three-cornered deal involving West Coast Packing Co.'s San Diego plant, the California Tuna Canning Co. and Westgate-Sun Harbor Co. may be completed soon.

Also involved is the National Steel & Shpibuilding Co., which is negotiating for lease of vacant property formerly owned by the old Peoples Packing Co., which was merged several years ago with the West Coast Co. of Long Beach. The cannery here occupies an acre of tidelands continguous to the shipbuilding plant.

Albert Vignola, general manager of West Coast, asked to vertify a report that the negotiations, underway for months, were concluded had no comment.

Also, it was learned that West Coast plans to transfer its packing activities to the California Tuna Canning Co. cannery in the South Bay.

Wade Ambrose, president of Westgate-Sun Harbor, said no decision has been reached as to where its catches will be processed. Since Crivello left the organization, Caltuna has been handling them.

Officials of National Steel long have sought more tidelands to expand the big shipbuilding plant but the only land available was that occupied by the West Coast cannery. The company now has government contracts in excess of 20 million dollars for construction of small craft and is reported seeking more orders.

Bad News:

San Diego tuna industry, facing one of the most disastrous years in its history, received more unpleasant news recently when word came from Panama that the 110-ton cargo of the local clipper *Sun Jason* is being delivered to Cecil Drake's new cannery at Moss Point, Miss.

For years Drake was one of the top executives in the tuna industry in San Diego, owning clippers and operating a ship chandlery. He moved to Mississippi in 1951. He is said to be negotiating with owners of other San Diego clippers to unload their catches at New Orleans and ship them to Moss Point.

Caltuna Active

Cannery workers at Caltuna again are at work after a period of idleness with the arrival April 29 of the crippled tuna clipper *Ronnie S* in tow of the tug *Pacific Retriever.*

The clipper *Mariner*, with 130 tons, arrived April 28 after being on the banks 78 days. The catch is consigned to the Van Camp cannery at San Pedro.

Rescued:

Members of the San Pedro bait boat *Verna Marie*, which burned and later sank in 60 fathoms of water eight miles south of Socorro Island last April 27, have been returned in a coast guard plane piloted by Capt. Donald MacDiarmid.

Capt. Clair J. Deertz, of Long Beach, said the fire started in the starboard auxiliary engine at noon Sunday.

The crew rowed four hours before being sighted and picked up by the fishing boat *Liberator*. George J. Hansen, of San Pedro, was the only other American aboard, the other crew members being Mexicans who reside at Mazatlan and Ensenada.

Deertz said the *Verna Marie* was fishing for the Pan-Pacific Co., of San Pedro, had been at sea 65 days and had 10 tons of tuna aboard when it sank.

Loss of the *Verna Marie* brought the total number of San Diego and San Pedro fishing craft destroyed by grounding, burning or sinking since Jan. 1 to 19, of which 10 were from San Diego.

The 2200-mile round trip flight to Socorro Island is probably the last rough water rescue mission Capt. Mac-

(Continued on page 25)

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SAN DIEGO'S TUNA FLEET SCATTERS TO DISTANT PARTS

San Diego's famed tuna clipper fleet is scattering from Bristol Bay, Alaska, to the Gulf of Panama because of the unsettled conditions in the local seafood packing industry, a recent survey revealed.

Latest of the fleet to cease fishing for local canneries, at least for the summer of 1952, will be the *Scarlet Queen*, the world's largest clipper. After spending more than three months at sea, the *Scarlet Queen* is due from the South American fishing banks Monday with 280 tons, less than half her capacity. The fish will be processed at the High Seas Tuna Packing Co. cannery at Roseville.

This summer the *Scarlet Queen* will operate as a refrigerating ship in the Alaska salmon trade. From San Diego the big clipper will go to Tacoma to pick up nine gillnetters and then head for Bristol Bay and the salmon fishing grounds. The *Sea Lark*, another huge San Diego clipper, also is engaged in the salmon trade.

To Peruvian Port

Fishing for Peruvian canneries under long time charter are the former San Diego tuna clippers *Sun Harbor*, *Sun Streak* and *La Playa*, while the *Rose Marie* was sold to a Peruvian cannery on the Galapagos Islands.

The clipper *Gulf Star*, built by Cecil Drake, former San Diego ship owner, at a Louisiana shipyard, has not visited San Diego since she was commissioned last year. Her fish, caught off the west coast of South America and in the Gulf of Panama, have been unloaded at Panama and shipped to eastern canneries. The local clipper *Sun Jason* is following suit.

San Diego clipper owners reportedly are reluctant to operate under regulations imposed by the Westgate-Sun Harbor Co. and the California Tuna Canning Co. Of the combined fleet of 54 boats operated by these two companies 16 clippers are now reported fishing for San Pedro and Long Beach canneries.

Admitting that its fishing fleet at the start of the year was too large and that boat owners not operating under contract were advised four months ago to seek other outlets for their catches, officials of Westgate-Sun Harbor have halted payment of any expenses of boats while in port, declined to pay either Mexican or Latin-American fishing licenses, and eliminated long-established policy of providing funds for entertainment of crews while in foreign ports.

Pay Agreement

Recently the Westgate-Sun Harbor Co. agreed to pay $320 a ton for yellowfin and $260 for skipjack under the following terms: "Full payment of the crew's share will be paid when the fish is processed. The balance in excess of the crew's share will be paid in equal installments in 30, 60, and 90 days after the fish is processed."

Boat owners contend that under this policy they not only have to finance a large part of the cannery's operations but have to wait three months to receive full compensation for their catches after arrival of the vessel in port.

Taking issue with the boat owners, Westgate-Sun Harbor officials assert that the policy now in effect was designed fundamentally to place its fishing fleet operations on a business-like basis and one that will pay off in the long run.

Primarily the company is endeavoring to prevent a repetition of events of the last year when the cannery became overstocked and clippers were laid up for several months.

"The whole idea is to conduct fishing and canning operations in an orderly manner and keep the boats operating the year around in conformity with market conditions," a company spokesman explained.

In striking contrast to San Diego canneries who rely on the hook and line tunaboats to supply them with yellowfin and skipjack, San Pedro and Long Beach packing plants with their fleets of purse seiners have received an average of a thousand tons of fish to less than 100 daily for San Diego thus far this season.

Up to a year ago, the northern purse seine fleets fished almost exclusively for bluefin tuna and sardines, but in the last year have been taking anything they could net, including albacore, yellowfin and skipjack.

SHRIMP BOATS SAIL SOON

Hundreds of shrimp boats will sally out of the ports of Guaymas, Topolobampo, Mazatlan and other west coast Mexican ports soon after an enforced month's idleness.

Mexico's Navy Department ordered the shrimpers to remain in port from March 7 to April 7 during the spawning season. The ban affected all coastal and inland waters from the state of Nayarit to the headwaters of the Gulf of California.

During the spawning season shrimp shipments continued to reach San Diego from the big refrigerating plants at Guaymas and Topolobampo. The shellfish were caught and sharp frozen before the boats were held in port.

Mexico To Probe Charges

Santiago Campbell, San Diego Mexican consul, reports that the Mexican government has started an investigation of the charge made by Capt. Anthony Silva that a Mexican naval officer at the port of La Paz, Baja California, attempted to extort $200 from the crew of the local tunaboat *Senorita*.

The *Senorita* sank March 11 in the Gulf of California. The eight man crew rowed ashore and made their way to La Paz. When Silva attempted to leave by a Mexican plane for San Diego with his crewmen, he said, the port captain at La Paz refused permission to leave unless he was paid $200. Silva refused. Later the American consul at Guaymas interceded.

On his return to San Diego Silva filed his charge of attempted extortion with the Mexican consulate here and also submitted a detailed report to authorities in Washington.

Campbell said the Mexican navy department is conducting the investigation. Silva said he has heard nothing since he filed his report with the Mexican consul. He expects to go to sea soon on another clipper.

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COMPLETE FOOD

(*Continued from page 13*)

mercial feeding, with its emphasis of increased weight of the animals and not always to the improvement of the animal's health, fish proteins seem destined to occupy a larger place in any rational plan of producing enough protein food for the world population now increasing at such an alarming rate.

The disparity between meat and fish consumption in America is so great that it seems a strange omission that so little effort has been exerted to educate America to a higher fish consumption. Meat consumption tops fish by over 1000%. This leaves an incredibly wide margin for educational work directed at the protein health values of fish of all kinds and the sound reasons why the American home should use more of this economical, high protein, tasty, nutritious and body building food.

Fish as a protein food, it is to be noted, has several advantages all its own, advantages not possessed by meat proteins. First, the quality of fish proteins cannot be impaired or undermined by alteration of the basal food supply that ocean life subsists upon. Man cannot ever intrude his commercial feeding ideas into Nature-protected ocean life. This is of far greater importance than is commonly thought, perhaps of desperate importance to the integrity of the world protein supplies of unborn generations of mankind.

A second advantage of fish proteins is this: Many years ago, a celebrated Chicago physician, Dr. Nicholas Senn, pointed out that the Eskimos, termed by him, "the healthiest people in the world," lived on an almost exclusive animal protein diet, largely derived from the sea. Eskimos were found by him to be immune to the diseases of malignancy that afflict the civilized contingent of mankind. Thus, as such a large part of the animal proteins in the original Eskimo diet were of ocean origin (before the Eskimo succumbed to the white man's "civilized" diet) and as all ocean life *of whatsoever kind* is richly supplied with with organic iodine, we may here find a clue of great importance relating to human health, because many scientists are coming to believe that a diet rich in *proteins and food iodine* (iodized proteins) may prove to be a great bulwark against the degenerative diseases that are now plaguing civilized people at an accelerated tempo.

In a world famishing for protein, with many land areas also deficient in iodine, the searchlight of science is turning slowly toward the oceans, a still virtually unexplored reserve of health-bettering and race-building proteins with their naturally-associated blood-building minerals.

Malthus, you will recall, predicted disaster for mankind when the geometrically-increasing population would overtake the arithmetically-increasing food supply. The Malthusian doctrine failed to reckon with the protein empire of the Seven Seas.

EBB'N FLOW

(*Continued from page 23*)

Diarmid will make in this area. He planned to turn over his command of the coast guard air-sea rescue station April 28 to Capt. William Scheiber, but received instructions from 11th District headquarters to retain command until after the Newport-Ensenada international yacht races held May 4.

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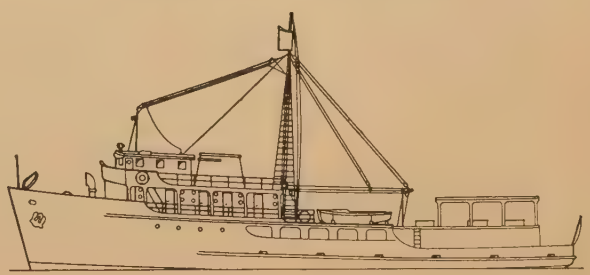

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Philippine Fisheries Production Totals

The Philippine director of fisheries announced recently that the 1951 fisheries production amounted to 230,000 metric tons, and the normal requirements were 500,000 tons. Expansion suggestions included greater interest in international fishing activities to exploit fishery resources of high seas and artificial production of fish in ponds and impounded or collected waters.

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Increase in Frozen Fish

The Fish and Wildlife Service reports that freezings of fish in the United States totaled 11,671,000 pounds during the month of March, which shows an increase of 7,757,000 pounds compared with the February figure of 9,914,000 pounds. Holdings of fish in cold storage on April 1 totaled 113,499,000 pounds, which is a decrease of 12,273,000 as compared to the March figure of 125,772,000 pounds. These holdings in part are: Cod fillets, 5,737,000; haddock fillets, 6,833,000; halibut, 5,321,000; ocean perch fillets, 10,241,000; sablefish, 2,609,000; salmon all species, 6,547,000, shrimp, 19,253,000. Total 113,499,000.

Less Steel Used in Cans

Total shipments of metal cans for fish and sea food for January this year amounted to 3,743 short tons of steel (based on the amount of steel consumed in the manufacture of cans), which was considerably below 5,960 short tons of steel during the corresponding period in 1951. A decline in west coast tuna canning and sardine canning were largely responsible for this drop in use of metal cans for packing of fishery products. This is based on a report issued by the Bureau of the Census on March 26.

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SAN DIEGO, CALIF.

Frank Silva

Frank P. Silva, 65, one of the founders of the San Diego fishing fleet died April 3rd, in his home at 447 Rosecrans St., San Diego.

Requiem mass was celebrated in St. Agnes Church. Burial was in Holy Cross cemetery.

Retired for several years, Mr. Silva had lived in San Diego 42 years and was one of the first fishermen going to sea from San Diego Harbor. He was a native of Portugal. Tunaboats he formerly owned included the *Governor, America, Superior, Uncle Sam, St. Teresa, Caroline S* and *Carrie Frank.*

Survivors are his wife, Carrie Silva; a daughter, Margaret Nunes; two sons, Andrew and Robert Silva, and a brother, Manuel Silva, all of San Diego; a sister, Mary Soares, of Riverside, California, seven grandchildren and one great-grandchild.

Fish Oils Production Takes Big Drop

During January 1952, the production of fish oils (exclusive of liver oils) in the United States and Alaska amounted to 96,201 gallons, compared with 657,780 gallons during the same month in 1951. This was a decrease of 561,579 gallons as compared with January 1951. The marked decrease resulted mainly from a drop of 506,064 gallons in the production of California pilchard (sardine) oil.

The January production of fish meal and scrap by firms which normally account for about 90 percent of the total output amounted to 4,631 tons, compared with 7,549 tons for the same period in 1951. This represents a decrease of 39 percent as compared with January 1951 mainly due to a drop in sardine and tuna meal production.

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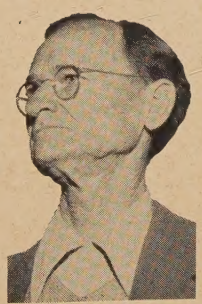
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New Specifications for Procuring Frozen Fish

New federal specifications for use by all federal agencies for procuring fresh chilled and frozen fish were issued early in March by the General Services Administration. The new specifications, PP-F-381C dated February 1, 1952, "Fish; Fresh (Chilled) and Frozen," supersede federal specification PP-F-381B dated June 24, 1941.

The new specifications give the various requirements that are to be met by suppliers of fresh chilled and frozen fish to federal agencies.

Copies of PP-S-381C are for sale by the superintendent of documents, Washington 25, D. C., at 10 cents per copy.

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